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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/533,034

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EXAMINER

YANG, JIE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/533,034	Applicant(s) FLAHAUT, DOMINIQUE MARIANNE LUCIENNE	
	Examiner JIE YANG	Art Unit 1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 July 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 42-73 is/are pending in the application.
- 4a) Of the above claim(s) 48,55 and 59-73 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 42-47, 49-54 and 56-58 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 April 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>4/13/06;7/17/07;8/6/07</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

Applicant's election of "Group I—Claims 42-58, drawn to a product of a nickel-chromium-iron alloy" and the species of claim 45 in the reply filed on 7/15/2008 is acknowledged without traverse (MPEP 818.03(a)). The applicant confirms the selection of species claim 45 from the species: I) claim 45; II) claim 48; and III) claim 55.

Claims 1-41 are cancelled, claims 48, 55, and 59-73 are withdrawn from consideration as being directed to a non-elected group and claims 42-47, 49-54, and 56-58 are pending for examination.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

The claims 56 and 57 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claimed language of "from 5 microns to 0.25 microns, or less" in claims 56 and 57 is not clear in term of the particle size. For the examination purpose, the particle size is assumed as ≤ 5 microns.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 42-47, 49-54, and 56-58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshimoto et al (EP 0 391 381 A1, thereafter EP'381) in view of Poole et al (US 5,328,499, thereafter US'499) and Gennari et al (US 5,049,355, thereafter US'355).

Regarding claim 42, EP'381 teaches an aging treated heat-resistant alloy (Abstract, Claims 1-5, and Col.6, line 4-Col.7, line 67 of US'166). The comparison of compositions between the instant invention and EP'381 is listed in following table. The major composition ranges disclosed by EP'381 (Abstract, Claims 1-5, and Page 3, line 20 to page 5, line 27 of EP'381) overlap the composition ranges of the instant claim, which is a prima facie case of obviousness. It would have been obvious to one of ordinary skill in the art at the time of the invention was made to select the claimed compositions C, Si, Mn, Ni, Cr, Mo, Nb, Ti, Zr, Co, W, Hf, Al, N, and Fe from the composition disclosed by EP'381 because EP'381 discloses the same utility throughout the disclosed ranges. SEE MPEP 2144.05 I. EP'381 does not

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specify adding 0.001 to 0.7 wt% O in the alloy. US'499 teaches an oxide dispersion strengthened (ODS) Ni-Cr-Co alloy with major composition ranges (Table 4 of US'499) overlap the composition ranges of the instant invention. US'499 teaches the O range from 0.35 to 0.63 wt% (Table 4 of US'499), which is within the claimed oxygen range as recited in the instant claim. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to control the O amount in the ODS alloy as demonstrated by US'499 in the alloy of EP'381 in order to obtain the desired oxide dispersion and reducing ductility results (Col.1, lines 7-10, table 3, and Col.4, lines 51-69 of US'499). EP'381 teaches selectively adding Nb, Ti, W, and/or Zr (Abstract, Claims 1-5, and Page 3, line 20 to page 5, line 27 of EP'381), which read on the claimed limitation of adding at least one of carbide forming element whose carbide is more stable than chromium carbide as recited in the instant claim.

Element	From instant Claim 1 (in wt%)	EP'381 (in wt%)	Overlapping range (in wt%)
C	0.01-0.7	0.3-0.8	0.3-0.7
Si	0.1-3.0	0.5-3.0	0.5-3
Mn	0-2.5	0-2	0-2
Ni	15-90	40-55	40-55
Cr	5-40	23-30	23-30
Mo	0-3.0	0-0.49	0-0.49
Nb	0-2.0	0.3-1.8	0.3-1.8
Ta	0-2.0	0-trace amount	0-trace amount

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Ti	0-2.0	0.02-0.5	0.02-0.5
Zr	0-2.0	0.02-0.5	0.02-0.5
Co	0-2.0	0.5 or more (replace Ni)	0.5-2
W	0-4.0	0.6-6	0.6-4.0
Hf	0.01-4.5	0-0.5	0.01-0.5
Al	0-15	0.02-0.6	0.02-0.6
N	0.001-0.5	0.08-0.2	0.08-0.5
O	0.001-0.7	--	--
Fe	balance	balance	balance

Still regarding claim 42, EP'381 teaches adding 0-0.5 wt% hafnium in the heat-resistant alloy, EP'381 does not specify hafnium is present as finely divided oxide particles. However, HfO_2 is well known as one of dispersion metal oxides in the oxide dispersion strengthened alloys. This position is evidenced by US'355. US'355 teaches a ductile, high strength, oxide dispersion hardened alloy (Abstract, Col.1, lines 7-16 of US'355). US'355 teaches hafnium oxide is one of solution metal oxide and hard, temperature-resistant metal oxide (Table of US'355). US'355 further teaches the metal oxide may be precipitated homogeneously and finely during precipitation annealing (Col.2, lines 18-36 of US'355). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to obtain finely divided hafnium oxide particles as demonstrated by US'355 in the alloy of EP'381 in view of US'499 in order to improve the ductility and strength of the alloy (Abstract of US'355).

Regarding claims 43-45, the composition ranges disclosed by EP'381 (Abstract, Claims 1-5, and Page 3, line 20 to page 5, line 27 of EP'381) in view of US'499 overlap the composition ranges of the instant claims. EP'381 in view of US'499 and

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US'355 is applied to the hafnium oxide limitation for the same reason as discussed in the rejection for the instant claim 42.

Regarding claims 46, EP'381 teaches adding 0.3-0.8 wt% C in the alloy, which overlapping the claimed 0.3-0.5wt% C as recited in the instant claim 46.

Regarding claim 47, EP'381 does not specify adding 0.03-0.2 wt% C in the alloy, US'499 teaches adding up to 0.2 wt% C in the ODP Ni-Cr-Co alloy, which overlapping the claimed 0.03-0.2wt% C as recited in the instant claim 47.

Regarding claims 49-54, EP'381 teaches adding 0.3-0.8 wt% C; 0.02-0.6 wt% Al, and 0-0.5 wt% Hf in the alloy, which overlapping claimed 0.3-0.6wt% C and 0.01 to 3.0wt% Hf (claim 49); overlapping claimed 0.1-1.0wt% Hf (claim 50); overlapping claimed 0.2-0.5wt% Hf (claim 51); overlapping claimed 0.1-10wt% Al and 0.01-4.5wt% Hf (claim 52); overlapping claimed 0.1-6wt% Al and 0.01-1.0wt% Hf (claim 53); and overlapping claimed 0.1-4.5wt% Al and 0.2-0.5wt% Hf (claim 54).

Regarding claims 56-57, EP'381 in view of US'499 and US'355 teaches the limitation of forming finely divided hafnium oxide in the Ni-Cr-Fe alloy as discussed in the rejection for the instant claim 42. The size of the metal oxide particles would depend on the result-effective variables of precipitation conditions. This position is evidenced by US'355. US'355 teaches

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the metal particles can vary from 2-20 nm to 0.25 microns as different precipitation conditions (Col.7, lines 31-68 of US'355), which overlapping the claimed particle size (≤ 5 microns) as recited in the instant claims 56-57. Therefore, it would have been obvious to one skilled in the art to have optimized precipitation conditions as demonstrated in US'355 to obtain desired metal oxide in the alloy of EP'381 in view of US'499. See MPEP 2144.05 II.

Regarding claim 58, EP'381 teaches adding 0-0.5 wt% Hf in the alloy, which is within the claimed adding up to about 5wt% Hf as recited in the instant claim. EP'381 in view of US'499 and US'355 is applied to the hafnium oxide limitation for the same reason as discussed in the rejection for the instant claim 42.

Double Patenting

A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

Claims 42-44, 46-47, 49, 52-54, and 56-57 are provisionally rejected under 35 U.S.C.101 as claiming the same invention as that of claims of 1-3, 9-11, 15, and 16-19 copending application No. 10/533,850 (Hereafter PG'850). This is a provisional double patenting rejection since the conflicting claims have not in fact been patented.

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 45, 50-51, and 58 are rejected on the ground of nonstatutory obviousness type double patenting as being unpatentable over claims 4-8, and 12-14, of copending patent application 10/533,850 (Hereafter PG'850) .

Although the conflicting claims are not identical, they are not patentable distinct from each other because the claims of

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PG'850 teach the similar composition of a Ni-Cr-Fe alloy as disclosed in the instant claims with the composition ranges of overlapping with the composition ranges as claimed in claims 4-8, 12-14 of PG'850. Thus, no patentable distinction was found in instant claims compared with 4-8 and 12-14 of copending patent application 10/533,850.

This is a provisional double patenting rejection since the conflicting claims have not in fact been patented

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jie Yang whose telephone number is 571-2701884.

The examiner can normally be reached on IFP.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on 571-2721244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JY

/Roy King/

Supervisory Patent Examiner, Art Unit 1793